

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-20 are pending in the application, with claims 1 and 11 being the independent claims. Claims 1 and 11 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 103***

**Barton and Gockler**

In the Office Action, claims 1-3, 5, 10-12, 14, 17, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barton, et al, U.S. Patent No. 6,654,431 (Barton) in view of Gockler, et al, U.S. Patent No. 6,185,202 (Gockler). Applicant respectfully traverses this rejection.

In rejecting the claims, the Examiner states that although Barton does not disclose "wherein each of the plurality of demodulators utilizes a different sampling rate," Gockler describes "a receiver comprises a plurality of demodulators, wherein each of the plurality of demodulators demodulates a different one of the plurality of frequency band signals." (Office Action, p. 3). Applicant respectfully disagrees with the Examiner's understanding of Gockler.

Gockler describes a modem having two transmitting channels and two receiving channels. (Gockler, col. 3, lines 3-5; FIG. 2). Each transmitting path includes an encoder (ENC), a digital interpolation filter (IF), and a modulator (MOD). (Gockler, col. 3, lines 16-22; FIG. 2). Each receiving path includes a demodulator (DEM), a decimation filter (DF) and a decoder (DEC). (Gockler, col. 4, lines 16-61; FIG. 2). Gockler further teaches that signal transmission occurs "in only one transmitting channel and one receiving channel. The other transmitting or receiving channel is then not active." (Gockler, col. 5, lines 41-45).

Thus, Gockler does not teach or suggest a receiver including "a plurality of demodulators, wherein each of the plurality of demodulators demodulates a different one of the plurality of frequency bands of the multi-tone, multi-band signal, wherein each of the plurality of demodulators utilizes a different sampling rate, wherein each demodulator includes a discrete Fourier transform module that performs a discrete Fourier transform on the plurality of tones within one of the plurality of frequency bands, and wherein the plurality of demodulators perform demodulation in parallel," as recited in amended independent claim 1. Furthermore, Gockler does not teach or suggest a method of demodulating a multi-tone, multi-band signal including "demodulating, in parallel, each of the plurality of data signals in a separate demodulator using a discrete Fourier transform, wherein each demodulator utilizes a different sampling rate," as recited in amended independent claim 11.

Applicant respectfully submits that the combination of Barton and Gockler fails to teach or suggest all the features of amended independent claims 1 and 11. Reconsideration and withdrawal of this rejection is respectfully requested. For at least

these reasons, and further in view of their own features, claims 2, 3, 5, 10, and 18 which depend from claim 1, and claims 12, 14, and 17 which depend from claim 11 are patentable over the combination of Barton and Gockler. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Barton, Gockler, and Allpress

In the Office Action, claims 4 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barton and Gockler, as applied to claim 1, in further view of Allpress, et al, U.S. Patent No. 6,496,546 (Allpress). Applicant respectfully traverses this rejection.

Claim 4 depends from claim 1 and claim 13 depends from claim 11. Allpress does not overcome all of the deficiencies of Barton and Gockler relative to claims 1 and 11, described above. For at least these reasons, and further in view of its own features, claims 4 and 13 are patentable over the combination of Barton, Gockler, and Allpress. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Barton, Gockler, and Ho

In the Office Action, claims 6-8 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barton and Gockler, as applied to claim 1, in further view of Ho, et al, U.S. Patent No. 5,317,596, et al (Ho). Applicant respectfully traverses this rejection.

Claims 6-8 depend from claim 1 and claim 15 depends from claim 11. Ho does not overcome all of the deficiencies of Barton and Gockler relative to claims 1 and 11, described above. For at least these reasons, and further in view of its own features,

claims 6-8 and 15 are patentable over the combination of Barton, Gockler, and Ho. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Barton, Gockler, and Agee

In the Office Action, claims 9 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barton and Gockler, as applied to claim 1, in further view of Agee, et al, U.S. Patent No. 6,128,276, et al (Agee). Applicant respectfully traverses this rejection.

Claim 9 depends from claim 1 and claim 16 depends from claim 11. Agee does not overcome all of the deficiencies of Barton and Gockler relative to claims 1 and 11, described above. For at least these reasons, and further in view of its own features, claims 9 and 16 are patentable over the combination of Barton, Gockler, and Agee. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Barton, Gockler, and Kahre

In the Office Action, claims 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barton and Gockler, as applied to claim 1, in further view of Kahre, et al, U.S. Patent No. 5,680,388 (Kahre). Applicant respectfully traverses this rejection.

Claims 19 and 20 depend from claim 1. Kahre does not overcome all of the deficiencies of Barton and Gockler relative to claim 1, described above. For at least these reasons, and further in view of its own features, claims 19 and 20 are patentable

over the combination of Barton, Gockler, and Kahre. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

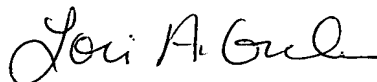
***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Lori A. Gordon  
Attorney for Applicant  
Registration No. 50,633

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1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

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